

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-11. (Canceled).

12. (Withdrawn) A method of assembling two permanent magnet blocks into a single magnet assembly comprising:

inserting a first permanent magnet block into a frame that prevents movement of the first permanent magnet block in all but one direction;

preventing movement of the first permanent magnet block in the one direction once inserted;

inserting a second permanent magnet block into the frame that prevents movement of the second permanent magnet block in all but one direction that would occur due to the first and second permanent magnet block having different magnetic orientations.

13. (Withdrawn) The method of claim 12 wherein preventing movement of the first permanent magnet block in the one direction comprises preventing movement of the first permanent magnet block in the one direction by a means other than the frame.

14. (Withdrawn) The method of claim 12 wherein preventing movement of the first permanent magnet block in the one direction comprises mechanically preventing movement of the first permanent magnet block in the one direction.

15. (Withdrawn) The method of claim 12 wherein preventing movement of the first permanent magnet block in the one direction comprises preventing movement of the first permanent magnet block in the one direction by adhesive process.

16. (Withdrawn) The method of claim 12 wherein preventing movement of the first permanent magnet block in the one direction comprises preventing movement of the first permanent magnet block in the one direction by a deformation of the frame.

17. (Withdrawn) The method of claim 16 wherein the deformation of the frame operates as a spring.

18. (Withdrawn) The method of claim 12 further comprising preventing movement of the second permanent magnet block in the one direction, once inserted.

19. (Withdrawn) The method of claim 18 further comprising applying adhesive to at least one of the sides of the first permanent magnet block and the second permanent magnet block and adhering the first permanent magnet block to the second permanent magnet block to the frame.

20. (Withdrawn) The method of claim 19 further comprising removing any non adhesive restraint from the first permanent magnet block and the second permanent magnet block once the adhesive has set.

21. (Withdrawn) The method of claim 20 further comprising fracturing one of the magnet blocks and removing the fractured pieces of the magnet block from the frame without damaging the other magnet block.

22. (Withdrawn) A method comprising:

placing a first permanent magnet block in a frame, the first permanent magnet block having a magnetic orientation aligned with the frame; and

placing adjacent the first permanent magnet block a second permanent magnet block in the frame, the second permanent magnet block having a magnetic orientation offset from the magnetic orientation of the first permanent magnet block..

23. (Withdrawn) The method of claim 22 further comprising placing an additional permanent magnet block in the frame, the additional permanent magnet block oriented 30 degrees from an adjacent permanent magnet block in the frame.

24. (Withdrawn) The method of claim 23 further comprising placing additional permanent magnet blocks into the frame such that a last permanent magnet block has a magnetic orientation 30 degrees from the first permanent magnet block, creating a magnetic circuit.

25. (Withdrawn) The method of claim 24 wherein additional permanent magnet blocks can be added that repeat the magnetic orientation of at least one adjacent permanent magnet block.

26. (Withdrawn) An apparatus, comprising:

a plurality of magnets, each magnet having the same shape and one of two magnetic orientations, each of the plurality of magnets having one of the two magnetic orientations assembled in one of eight orientations of the magnets, and each of the plurality of magnets having the second of the two magnetic orientations assembled in one of four orientations of the magnets, to form a magnetic circuit.

27. (Withdrawn) The apparatus of claim 26, wherein the magnet shape comprises one of a square, triangle, hexagon and octagon.

28. (Withdrawn) The apparatus of claim 27, wherein the first magnetic orientation is perpendicular to the face of the magnet, and wherein the second magnetic orientation is at an acute angle to the face of the magnet.

29. (Withdrawn) The apparatus of claim 28, wherein the acute angle is 15 degrees.

30. (Withdrawn) The apparatus of claim 28, wherein the acute angle is 30 degrees.

31. (Canceled).

32. (New) A method of building a permanent magnet assembly, comprising:

mechanically restraining a plurality of permanent magnet blocks so as to prevent the plurality of permanent magnet blocks from moving with respect to one another;

mechanically restraining a first permanent magnet block not in the plurality of permanent magnet blocks from moving in either a first direction relative to the plurality of permanent magnet blocks or in a second direction relative to the plurality of permanent magnet blocks, the first and second directions defining a plane, the first permanent magnet block having a first magnetic orientation;

moving the restrained first permanent magnet block with respect to the restrained plurality of permanent magnet blocks, the moving in a third direction not parallel to the plane, the moving to put the first permanent magnet block into a position proximate to the restrained plurality of permanent magnet blocks so as to form a desired angle between the first magnetic orientation and a magnetic orientation of one of the plurality of permanent magnet blocks;

further restraining the first restrained permanent magnet block in the position.

33. (New) The method of claim 32 wherein mechanically restraining the first permanent magnet block from moving in the first direction comprises restraining the first permanent magnet block using a nonmagnetic frame.

34. (New) The method of claim 33 wherein further restraining the restrained first permanent magnet block in the position comprises deforming the nonmagnetic frame.

35. (New) The method of claim 32 wherein mechanically restraining the first permanent magnet block from moving in the second direction comprises restraining movement of the first permanent magnet block with a 3-axis ball screw driven linear slide.

36. (New) The method of claim 33 wherein mechanically restraining a plurality of permanent magnet blocks comprises restraining at least some of the plurality of permanent magnet blocks using the nonmagnetic frame.

37. (New) The method of claim 32 wherein the magnetic orientations of the first permanent magnet block and the one of the plurality of permanent magnet blocks differ.

38. (New) The method of claim 37 wherein the desired angle between the magnetic orientations of the first permanent magnet block and the one of the plurality of permanent magnet blocks is 30 degrees.

39. (New) The method of claim 32 wherein further restraining the restrained first permanent magnet block comprises:

applying adhesive to at least one side of one of the permanent magnet blocks; and

adhering the first permanent magnet block to a permanent magnet block in the plurality of permanent magnet blocks.

40. (New) The method of claim 39 further comprising removing a mechanical restraint from the first permanent magnet block once the adhesive has set.

41. (New) The method of claim 40 further comprising:

fracturing one of the proximate magnet blocks while maintaining the mechanical restraint of the other proximate magnet block; and

removing the fractured magnet block from the frame.

42. (New) The method of claim 32 wherein further restraining the restrained first permanent magnet block is selected from the group consisting of mechanically or adhesively restraining movement.